

Kentucky Recycling Initiatives and Grants Progress in Solid Waste Management Statewide Solid Waste Management Workshop January 25-26, 2007

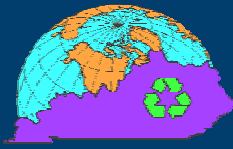
Environmental & Public Protection Cabinet
Division of Waste Management
Recycling and Local Assistance Branch
Sara D. Evans, Manager



To Protect and Enhance Kentucky's Environment



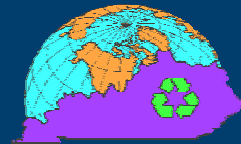
Overview



- Overview of Kentucky's Cleanup and Recycling Programs
 - Illegal Dumps
 - Litter
 - Waste Disposal
 - Tires
 - Household Hazardous Waste
 - Recycling
 - SB 50 improvements
- Summary
- Future Projections



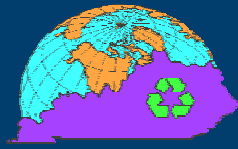
Status of Illegal Dump Cleanups: 2001-2004



- Significant cleanup, education and enforcement efforts result in far fewer dumps created since passage of HB 174 in 2002. HB 174 provided local funding for illegal dump and litter cleanups.
 - 2001- 1,807 dumps cleaned at a cost of \$6.6 million, with 1,898 illegal dumps remaining to be cleaned.
 - 2004 - 934 dumps cleaned at a cost of \$3.3 million, with 621 illegal dumps remaining to be cleaned.
 - Cleanups successful, but costly when compared with return on investment in recycling.
 - Illegal dump cleanups cost an average of \$580 per ton.



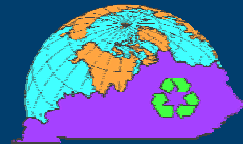
Litter Programs: 2001-2004



- Almost 10 times more litter was picked up in 2004 than in 2001, and the costs for cleanup dropped significantly.
 - 2001 - 77,501 bags cleaned at a cost of \$4.2 million (**\$54.19 per bag**).
 - 2004 - 700,438 bags of litter cleaned from 114,837 miles of roadways at a cost of \$8.9 million (**\$12.70 per bag**).
 - Roadways are cleaner, but majority of materials found along roads (bottles and cans) would return value if recycled.



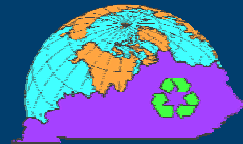
Waste Disposal



- The average disposal fee at Kentucky landfills in 2004 was \$28.67/ton, 15 percent cheaper than the average of surrounding states landfill rates.
- While cheaper disposal prices help encourage proper disposal, they can also adversely affect our ability to build recycling infrastructure as an alternative to high waste disposal costs.
- Waste disposal at landfills continues to increase. In 2004, Kentucky landfilled 4.9 million tons of municipal solid waste - up from 4.6 million tons in 2001.
- Saving landfill space is the most common reason given for recycling, but studies show this has not proven to be a motivating factor for the majority of Americans. This also a difficult argument to make in Kentucky where we have 20+ years of landfill space.
- The cost to close a remediate an old landfill ranges from \$500,000 to \$9 million. Kentucky has approximately 600 old landfills pending closure.



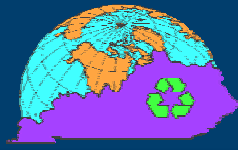
Waste Tire Program



- The Waste Tire Program mandated by KRS 224.50-850 was established in 1998 and directs the cabinet to “...manage waste tires in a way that protects human health, safety and the environment, and which encourages the development of markets for waste tires.” The waste tire program is focused on three primary activities to achieve its statutory mandate. These include:
 - Waste Tire Amnesty
 - Waste Tire Remediation
 - Market Development



Waste Tire Program - Amnesty and Remediation



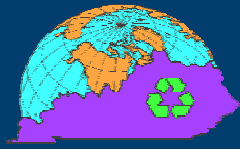
- Drop-off programs for citizens and cleanup of tire piles for all counties has resulted in over 15 million tires cleaned and recycled since 1998.
- Keep America Beautiful recognized Kentucky as the top state in the nation for tire recycling and cleanup during the 2004 and 2005 Great American Cleanups.
- Next round of amnesties scheduled to begin Fall 2006.



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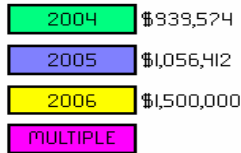
Waste Tire Program – Market Development



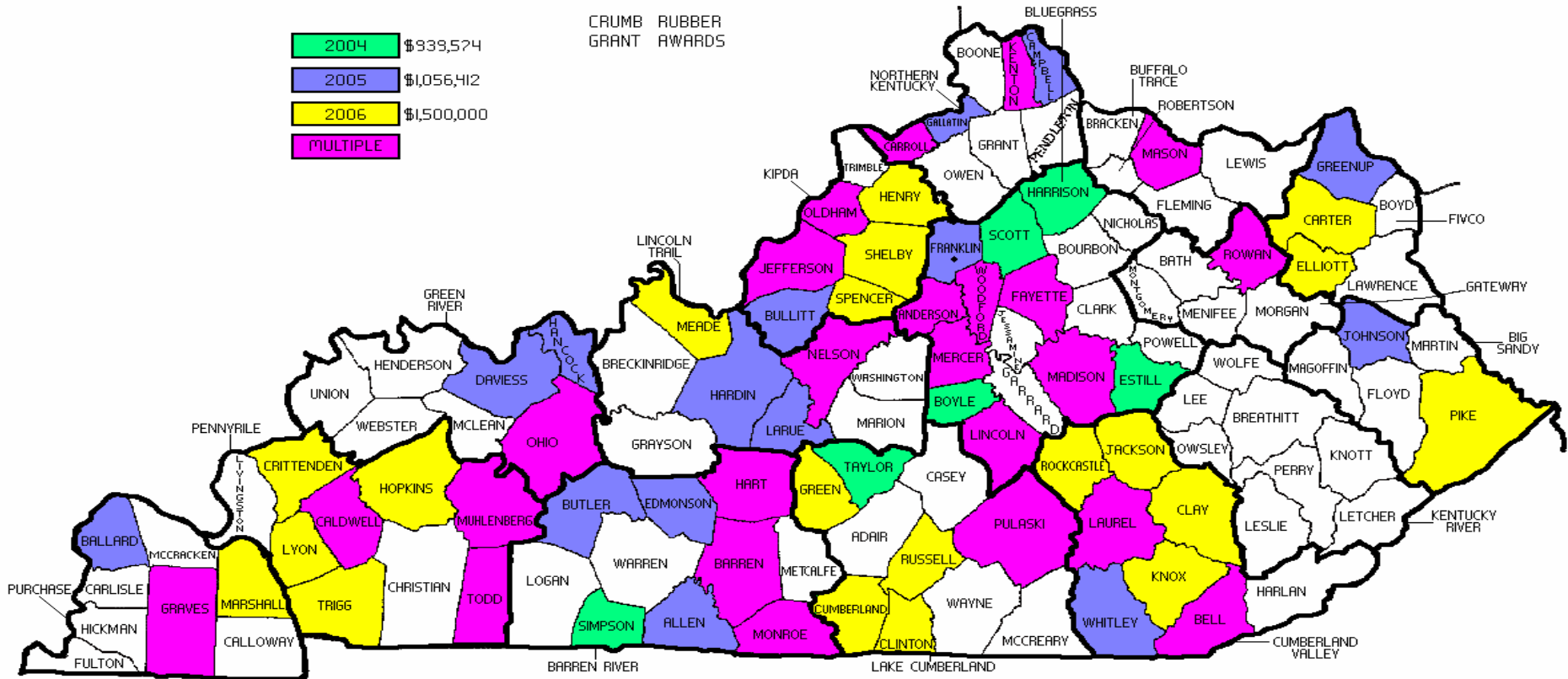
- **Market Development Projects** –A sustained and long-term initiative that proactively seeks and develops beneficial end use markets for waste tires.
 - Crumb rubber applications for athletic fields and playgrounds
 - Tire-derived fuel
 - Rubberized asphalt on highways
 - Blasting mats
 - Mulch mats
 - Curb Stops
-



Crumb Rubber Grant Awards

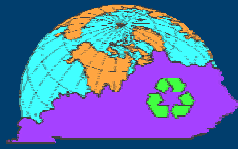


CRUMB RUBBER
GRANT AWARDS

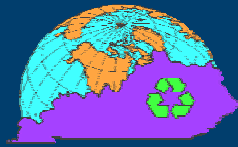


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Waste Tire Program



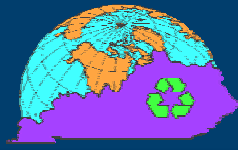
Household Hazardous Waste



- Everyday products like nail polish and remover, spot removers, moth balls, shoe polish, pest strips, pesticides, drain and oven cleaners, furniture polish and wax, paints, stains, wood preservatives, used motor oil and antifreeze and even some medicines produce potentially hazardous wastes when they are thrown out.
- Most electronic products contain at least some hazardous materials such as lead, chromium, cadmium and sometimes mercury, with PCB's found in older electronics.
- Links to locations for e-scrap recycling are on our website: www.recycle.ky.gov. About 14 locations statewide, with year-round drop-offs in Louisville and in Lexington by 2008. Dell and Office Depot offer “take-back” programs.



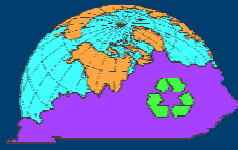
Status of Recycling 2001-2004



- In 2004, Kentuckians threw away \$63 million in recycling value for paper, plastic and aluminum.
- Kentucky's recycling rates have improved over the last several years, but we still lag behind the national recycling average of 28%.
- We recycled 22% of our paper, plastic, aluminum, steel and glass in 2004, an improvement over the rate of 13% in 2001.
- Only 439,000 households (27%) have access to curbside recycling in 26 counties.



Kentucky Recycling Interest Group (KRIG)

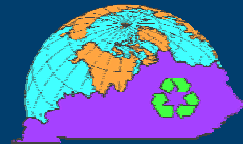


The cabinet initiated a series of meetings in 2006 with interested parties across the Commonwealth to promote a new emphasis on rethinking waste and recycling - **“Waste is a Resource Misplaced”**.

The Kentucky Recycling Interest Group (KRIG) holds great promise as a statewide forum for business and industry, local and state government, and environmental groups to share their expertise in waste minimization, reuse and recycling.

In their August meeting, KRIG’s information exchange included: expanding the base of Ky. Industrial Materials Exchange, national and statewide trends in beneficial reuse of “materials formerly known as waste ;)", partnering local government recycling with business end-users of recyclables, KY Excel recycling/waste reduction incentives, and recycling grants for education and infrastructure.

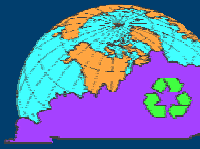




- **Environmental/Governmental Groups:**

Louisville Metro, Tri-County Recycling, Morehead State University, University of Louisville - Institute for the Environment and Sustainable Development, Lexington-Fayette Urban-County Government, Letcher County, Woodford County, Mason County, Bluegrass PRIDE, Kentucky Pollution Prevention Center, Sierra Club, Red River Gorge Cleanup Programs, Fort Knox Recycling Center, Solid Waste Coordinators of Kentucky, Kentucky League of Cities, Environmental and Public Protection Cabinet, Kentucky Economic Development Cabinet.





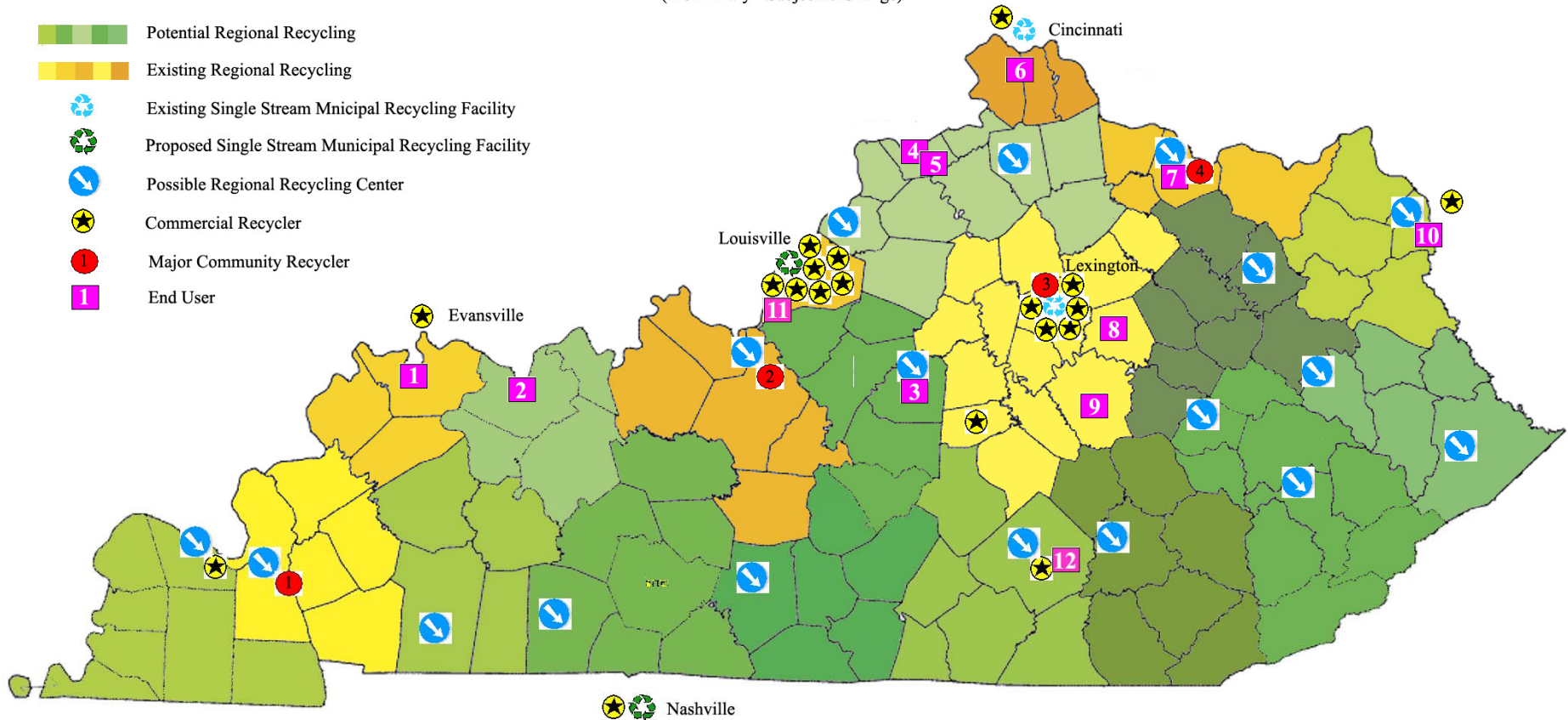
- **Business and Industry:**

Champion Polymer, Signode, The David J. Joseph Co., River Metals Recycling, Gallatin Steel, Temple-Inland, SECAT Inc., Dalton Tire Recycling Inc., Play Mart Inc., North American Stainless, Weyerhaeuser Company, Toyota, Beverage Industry Recycling Program (BIRP), Green Metals Recycling, Aleris International, All Weather Insulation LLC, Kimberly Clark, Soft Landing Rubber Re-Tek Inc., AK Steel Corporation, Novelis Corporation (formerly Alcan), Martin Tire Company and Wal-mart.



Recycling Infrastructure Projections

Current & Potential Support for Recycling In Kentucky (Preliminary - Subject to Change)



Recycling Infrastructure Projections

MAJOR COMMUNITY RECYCLING OPERATIONS

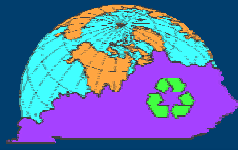
1. Regional Recycling Corp.
(Corrections Industries) –
Eddyville
2. Fort Knox Recycle Center – Fort
Knox
3. Lexington Urban County
Government/Bluegrass Regional
Recycling – Lexington
4. Mason County Recycling Center -
Maysville

END USERS

1. Weyerhaeuser – Henderson
2. Kimberly Clark – Owensboro
3. All Weather Insulation – Springfield
4. North American Stainless – Ghent
5. Gallatin Steel – Ghent
6. Signode – Florence
7. Temple – Inland – Maysville
8. Infiltrator Systems (Champion Polymers)
– Winchester
9. Novelis – Berea
10. AK Steel – Ashland
11. Arco Aluminum - Louisville
12. Play Mart - Somerset



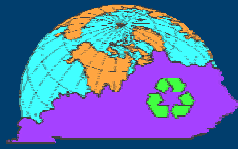
Why Recycle?



- At least 12 major manufacturers of recycled products in Kentucky have a need for feedstock of used paper, plastic, aluminum and steel.
- In 2005, these manufacturers contributed to our economy an annual payroll of over \$202 million, added a value of \$612 million and contributed to gross sales of \$1.34 billion in 2005. For every \$1.00 of raw recycled materials processed in Kentucky, an additional value of \$0.44 is added.
- Recycling commodities' prices are holding at solid sustainable levels with some commodities, such as aluminum, plastic, and steel, at historic highs.
- **The energy savings realized in manufacturing with recycled feedstock ranges from 45% for paper to 95% for aluminum.**



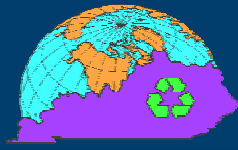
Why Recycle?



- There are long term environmental and economic impacts inherent in landfilling, with hundreds of millions in closure costs, with potential for groundwater and other environmental contamination.
- Mining ores to manufacture products from virgin materials can significantly impact the environment of the mining region.
- Recycling returns a value of \$332/ton, as compared with the cost expended on illegal dump cleanup of \$520/ton.
- Cleanups will continue to be funded, but recycling grants are an added incentive for those local governments who cleanup and prevent dumping from occurring.



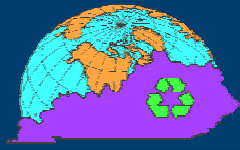
State Government Recycles



- Kentucky state government employees recycle 208 lbs. paper per person per year, second only to Minnesota state government employees.
- Kentucky state government employees increased their paper recycling to 3.1 million pounds in 2004 as compared with 2.7 million pounds in 2001.
- The state government recycling and confidential document destruction program pays for itself through the sale of recycled paper. The program recently relocated to a new recycling building and purchased new trucks with the proceeds from the recycled paper. No fees or taxes are used in support of the program.



SB 50 Adds Recycling Grants



- **SB 50** amends the Kentucky Pride program to create authority for the cabinet to provide grants for recycling and household hazardous waste management, in addition to continuing to provide illegal dump and litter cleanup grants.
 - Upon completion of the application process by the cabinet, counties, cities, urban governments, schools and other political subdivisions of the state will be eligible to apply.
 - Recycling grant procedures and applications are on our website at www.recycle.ky.gov.
 - Deadline for applications is March 31, 2007.
 - First round of grants will primarily fund equipment for regional projects in underserved areas.
 - \$2.3 million in grants will be awarded in May 2007.
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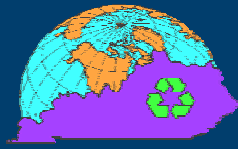


Summary

- Kentucky has made significant headway in cleanups, but at a significant annual cost of over \$20 million in state, federal and local dollars.
- Waste disposal continues to rise, disposal rates are cheap in Kentucky and we have abundant landfill space.
- Kentucky is a model state for waste tire management and state government paper recycling.
- E-scrap and household hazardous waste a challenge for all states, including Kentucky, but we are developing options.
- Community recycling rates improving, but still less than the national average.
- KRIG proving to be excellent forum for advancing and advising the cabinet on recycling, reuse and beneficial reuse.
- Cabinet initiatives geared towards achieving 35% recycling rate by 2010.
- Recycling returns significant environmental and economic benefits.



Kentucky Government Recycles!



www.recycle.ky.gov



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